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Legislative Audit Division

State of Montana

Report to the Legislature

June 1998

EDP Follow-up Audit Report

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Department of Revenue

This report provides the status of prior recommendations from an electronic data processing audit (97DP-04) at the Department of Revenue. Of the 16 initial recommendations, 12 are implemented and 4 are not implemented. The prior recommendations not fully implemented address:

- Periodic review of processing edit adjustments.
- Operating system security procedures.
- Electronic access controls.
- Internal security evaluations.

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EDP AUDITS

Electronic Data Processing (EDP) audits conducted by the Legislative Audit Division are designed to assess controls in an EDP environment. EDP controls provide assurance over the accuracy, reliability, and integrity of the information processed. From the audit work, a determination is made as to whether controls exist and are operating as designed. In performing the audit work, the audit staff uses audit standards set forth by the United States General Accounting Office.

Members of the EDP audit staff hold degrees in disciplines appropriate to the audit process. Areas of expertise include business and public administration.

EDP audits are performed as stand-alone audits of EDP controls or in conjunction with financial-compliance and/or performance audits conducted by the office. These audits are done under the oversight of the Legislative Audit Committee which is a bicameral and bipartisan standing committee of the Montana Legislature. The committee consists of six members of the Senate and six members of the House of Representatives.

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June 1998

The Legislative Audit Committee
of the Montana State Legislature:

This is a follow-up report of our EDP audit (97DP-04) of general and application controls at the Department of Revenue. The original report included recommendations applicable to the Computer Assisted Mass Appraisal System (CAMAS), Revenue Control System (RCS), Individual Income Tax System (IIT), and Delinquent Accounts Receivable System (DAR). This report discusses the prior recommendations not yet fully implemented by the department.

We thank the Department of Revenue for their cooperation and assistance throughout the review.

Respectfully submitted,

Scott A. Seacat

Scott A. Seacat
Legislative Auditor

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Department of Revenue	Mary Bryson, Director
	Mike Boyer, Information Technology Administrator
	Jeff Miller, Policy and Performance Management Manager
	Judy Paynter, Tax Policy and Research Manager

Chapter I - Introduction

Introduction

We performed a follow-up review of the electronic data processing audit (97DP-04) of the Department of Revenue. The original report, issued in December of 1996, contained 16 recommendations for improving existing controls within the department's electronic data processing environment. This report outlines the status of the prior recommendations partially or not implemented.

Background on Original Audit

The original audit reviewed general controls over the department's AS/400 computer which processes property tax data for the Computer Assisted Mass Appraisal System (CAMAS). The audit also evaluated application controls over the Individual Income Tax (IIT) system, the Delinquent Accounts Receivable (DAR) system, and CAMAS. Except for CAMAS, the systems noted above process data on the Department of Administration's central mainframe computer.

Follow-up Scope

The objective of our follow-up audit was to determine the implementation status of the original audit recommendations. We interviewed department personnel and reviewed supporting documentation. Listed below are prior recommendations the department has implemented since the original audit.

- Establish procedures to ensure IIT address changes do not overwrite existing DAR address data.
- Document IIT system edits for management and personnel review.
- Document and communicate department policy for adjusting IIT system processing tolerance errors.
- Implement cost-effective physical security controls within the computer facility.
- Secure backup information in an off-site location away from the computer facility.
- Evaluate and document AS/400 operating system installation parameters.
- Develop security procedures over the AS/400 operating system as required by department policy.
- Implement procedures to require users to change their CAMAS system passwords.
- Review employee access privileges to CAMAS on a scheduled basis and restrict employee access in accordance with job duties.

- -- Annually review employee-owned properties, and properties owned by their family members, to ensure compliance with department policy, which prohibits employees from making system changes to those properties in CAMAS.
- -- Establish procedures to ensure internal audit recommendations for CAMAS are implemented.

Overall audit results are outlined below.

Table 1

Implementation Status of Recommendations

Implemented	12
Not Implemented	4
Total Recommendations	16

Chapter II - Recommendation Status

Recommendation Status

This chapter discusses the status of prior recommendations not fully implemented by the department. Recommendations which are fully implemented are listed beginning on page one of the report. The department concurs with the prior recommendations and continues its progress toward complete implementation.

Income Tax Return Adjustments Should be Supported

In prior **recommendation #3**, we recommended the department establish procedures for periodic review of processing edit adjustments completed by Office Audit Bureau employees.

The recommendation is not implemented. Department procedures provide that employees document reasons why they clear edit error conditions or make adjustments to tax returns. Out of 58 tax returns reviewed during the original audit, one return included an underpayment penalty of $414 which an employee adjusted to zero without supporting documentation. Upon further review, we found the individual taxpayer's prior year return also included a $500 underpayment penalty which was also adjusted to zero without supporting documentation. The department implemented collection procedures following the original audit.

The IIT system is designed to allow employees to override error conditions upon employee discretion. Because the IIT system allows employees to override warning edits, employees can make unauthorized tax return adjustments or process the returns without correcting errors. The examples we found represent how department employees can override IIT system error conditions and allow tax returns to process without due assessment of additional tax or penalty.

Periodic management review of adjustments or error overrides completed by Office Audit Bureau employees would improve tax return processing controls and help ensure compliance with department procedures. The department has added an enhancement request to produce a report of processing edit adjustments.

Restrict Access Per Job Duties

In prior **recommendation #12A**, we recommended the department restrict employee access to department-wide applications according to job duties.

The recommendation is not implemented. The original audit found employees with unnecessary access to department-wide applications (IIT, DAR, RCS). Specifically, we found programmers with unlogged write access to production programs and data. Other employees had access to applications which they no longer needed because their job duties had changed.

During the follow-up, we found the department had not modified employee access privileges. The employees we identified with unnecessary access to the IIT system could change income tax return data such as taxable income, withholding, exemptions, and deductions. We also found employees who could adjust revenue collection amounts in RCS or reduce tax receivable balances in DAR. Overall, the employees no longer required the access privileges based on their job duties.

To improve access controls, the department tried to develop an automated procedure to log and review all access to systems by someone other than the primary programmer. However, at the time of our follow-up, the department determined the automated procedure would not operate. The department plans to establish an alternative solution.

Document the Access Provided

In **recommendation #12B**, we recommended the department document the access provided to employees for department-wide applications.

The recommendation is not implemented. The prior audit found employee access to department-wide applications (IIT, DAR, RCS) was documented for some, but not all, employees on authorized request forms. The department concurred with the recommendation and intended for its automated procedure to record instances of unauthorized employee access. Although the procedure could help the department detect unauthorized access to its applications, it will not prevent unauthorized employees from viewing or changing application data.

Authorized request forms provide initial documentation of requested access and can help prevent unauthorized access to department applications. In addition to documenting their business need for the access requested, the request forms could be used to document the employee's agreement to abide by department policy concerning access to confidential information.

Disaster Recovery Plans Should be Completed

In **recommendation #13**, we recommended the department document and test formal disaster recovery procedures for department mission-critical applications.

The recommendation is implemented. The department concurs with this recommendation and has participated in two disaster recovery drills coordinated by the Department of Administration (DOA) at the Weyerhaeuser hotsite. As a result, the department successfully restored its CAMAS and Liquor Tax systems. During future recovery tests, the department intends to work with the DOA to recover its mainframe applications and telecommunications between the mainframe and the AS/400 computer system.

This recommendation focuses on department responsibilities for disaster recovery in accordance with the Montana Operations Manual (MOM) section 1-0240.00. The MOM outlines agency responsibilities which include assigning recovery team member responsibilities; assessing information and resource requirements necessary to maintain applications; and determining alternate procedures which may be necessary if recovery cannot be completed within required time frames.

Disaster recovery planning is an ongoing process and requires continued participation during hotsite recovery drills. As the department continues to work with the DOA, the department should prioritize application recovery procedures, define department personnel responsibilities, and formally document overall recovery procedures.

Internal Evaluations of Security

In **recommendation #14**, we recommended the department implement formal policies which address safeguarding information technology resources in accordance with state law.

The recommendation is not implemented. Section 2-15-114, MCA, requires the department to be ". . . responsible for assuring an adequate level of security for all data and information technology resources within the department and shall: . . . (4) ensure internal evaluations of the security program for data information technology resources are conducted." The prior audit found the department had not implemented policies which address safeguarding data and information technology resources.

Prior audit recommendations not yet implemented address income tax tolerance level and processing edit/error correction procedures; unnecessary employee access to applications; and documenting employee access to department-wide applications. Department-wide policies could help ensure data processing activities are controlled and completed according to management's expectations.

The department is in the process of evaluating and revising its information technology environment through Project MET▲. This project includes a revision of department-wide core business functions; development of comprehensive strategic policies; organizational restructuring; and replacement of outdated information processing systems. In December 1998, the department intends to implement strategic policies over its information technology resources in accordance with state law.

Agency Response

Montana Department of
REVENUE

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May 29, 1998

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Mr. Scott A. Seacat, Legislative Auditor
Legislative Audit Division
Room 135 State Capitol
PO Box 201705
Helena, MT 59620-1705

Dear Scott:

This is the Department of Revenue (DOR) response to the 1998 EDP Follow-up Audit Report.

Recommendation #3. Establish procedures for periodic review of processing edit adjustments completed by Office Bureau employees.

Concur. The Department's current plans will not result in the replacement of IIT for at least two years. In that light, we believe it is appropriate to develop an automated adjustment review report for department management. As referenced in the report, the IIT system produces audit records. We are currently assessing alternatives to provide a periodic reporting capability associated with the audit record. A recommendation to DOR mangement, with estimated cost of development and operation, will be prepared by August, 1998. This provides the opportunity for any resulting development to be included in IIT changes made prior to the next tax season.

Recommendation #12.

A. Restrict employee access to department-wide applications according to job duties.

Concur. Currently, business lead personnel determine and submit authorizations to access various applications. By July 1, 1998, the DOR will implement a procedure to identify employees who have changed positions and should have their access authorizations examined for appropriate changes. We will also document the need for an automated personnel "move/termination" alert to be generated by the MT PRRIME human resources module. This would allow immediate notification of a change in employee status, which could require modification to their authorized access.

Mary Bryson, Director ▲ Legal Affairs / Personnel & Training / Research & Information
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B. Document employee access to department-wide applications.

Concur. As mentioned above, authorizations to access various applications are determined by business lead personnel. A procedure will be implemented by July 1, 1998, to ensure the responsible business lead receives and retains appropriate access authorization requests. The ongoing procedure will include a periodic, preferably semi-annual, "audit" of each application to ensure that all authorized users have appropriate access request forms on file. Access will be removed for users without the required forms. As noted in the EDP Follow-up Audit Report, the request forms will include an indication of employee acceptance of department information confidentiality policies.

Recommendation #13. Prioritize applications recovery procedures, define personnel responsibilities and formally document overall recovery procedures.

Concur. The Department of Administration provides a state government-wide disaster recovery coordination and hot site exercise plan, which we participate in. We have participated in disaster recovery drills and hot site exercises involving our AS/400 applications. We have approached disaster recovery on an application-by-application basis rather than through a set of department policies and a comprehensive disaster recovery plan. To date, that plan has not provided us the opportunity to test recovery for our mainframe applications.

Near-term development of such a plan would require significant department resources at the same time we are addressing Year 2000 compliance and POINTS ("Process Oriented INtegrated Tax System") development. POINTS, due to its integrated design of both the database and applications, will provide us the opportunity to develop a comprehensive database and application recovery plan for our new generation of applications.

Recommendation #14. Implement formal policies which address safeguarding information technology resources in accordance with state law.

Concur. We believe this recommendation reiterates concerns expressed in other audit recommendations, particularly those related to employee access authorization and security. As indicated, we concur with those recommendations and recognize that Recommendation #14 adds the weight of state statute to the department's responsibility to take corrective action.

As referenced in the report, Project MetΔ and the associated POINTS development provide a unique opportunity to address strategic and implementationspecific issues identified in the audit. The present implementation target for Phase I of POINTS is September, 1999.

We appreciate the opportunity to respond and thank you and your staff for their professional conduct and courtesy on the audit.

Sincerely,

Mary Bryson

Mary Bryson
Director